

[3.0049]

A KEY TO THE DRYOPID GENERA OF THE NEW WORLD
(Coleoptera, Dryopoidea)¹

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INTRODUCTION

Seven genera representing the family Dryopidae have thus far been reported from the Western Hemisphere. Of these, only three are common and widely-distributed within the hemisphere: *Dryops*, *Helichus*, and *Pelonomus*. These three occur within the United States, and are included in the keys of Arnett (1963), Leech and Chandler (1963), and Leech and Sanderson (1959). All of these keys are satisfactory for the species within the United States, but none of them will serve for some of the Neotropical species, as is evident from the remarks by Hinton (1937a) concerning the characters used by Musgrave (1935) to separate *Dryops* from *Helichus*. Furthermore, no one has published a key including the other four genera. One is needed, hence this attempt.

Blackwelder (1944) lists the species recorded to that date, with an indication as to the country from which each was described. His extensive bibliography (1957) provides citations of the original descriptions of all such species, so I shall not duplicate the references or species list here. The genus *Lutrochus* listed by Blackwelder is now placed in the family Limnichidae (cf. Hinton, 1939), and the species he listed under the genus *Parygrus* should be transferred to the genus *Helichus* (Hinton, 1936a).

I have had no opportunity to examine specimens of *Protoparnus*, *Sostea*, or *Sosteamorphus*, so the characters relating to these genera in the key below are extracted solely from the literature. The only feature I note in Pascoe's (1860) description of the genus *Sostea* or elsewhere that really distinguishes it from the genus *Helichus* is the large, laminate basal segment of the antenna (Fig. 1), which he further describes thus: "... when in repose it appears to act as a

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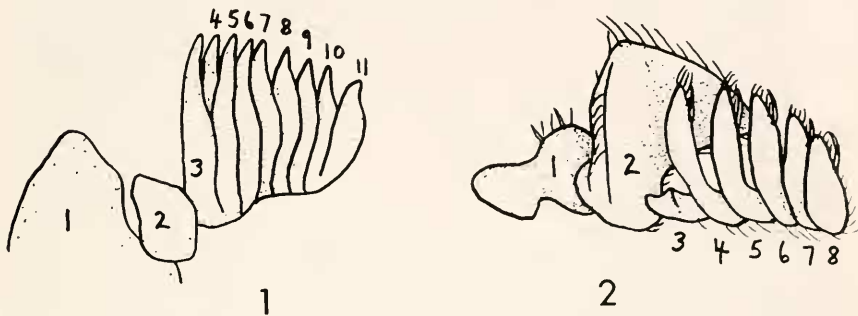
valve, closing in entirely the rest of this organ. . ." (the antenna). If this applies to the Brazilian species as well as to the southeastern Asiatic species examined by Pascoe, it should suffice, for it certainly does not fit the species of *Helichus* I have seen or found described. In *Helichus*, the second segment of the antenna is typically much more inflated than the first, tending to enclose the segments beyond it, rather than to be covered by the first (Fig. 2). However, Hinton (1937b) remarked that there seemed to be no good character for separating these two genera, so the antennal character used here may be invalid.

KEY TO NEW WORLD GENERA OF THE FAMILY DRYOPIDAE

1. Hind wings absent 2
Hind wings present 3
- 2(1). Pronotum with median longitudinal impression; elytral intervals coarsely tuberculate (1 sp. from Chile) *Sosteomorphus* Hinton 1936
Pronotum without median longitudinal impression; elytral intervals not tuberculate (1 sp. from St. Vincent, Lesser Antilles; 4 spp. from New Zealand).
. *Protoparnus* Sharp 1883
- 3(1). Pronotum with a sublateral longitudinal carina or virtually complete sulcus on each side 4
Pronotum without sublateral carinae or nearly complete sulci 5
- 4(3). Hairs on pronotum and elytra sparse and inconspicuous; pronotum with sublateral carinae; margin of each elytron with a densely pubescent depression at about apical fourth (1 sp. from Panama, 1 from Venezuela, 1 from Mexico).
. *Elmoparnus* Sharp 1882
Pronotum and elytra densely and conspicuously pubescent; pronotum usually with sublateral sulci; margin of elytron without pubescent depression at apical fourth (ca. 21 spp. ranging from southern United States to Chile and Brazil; many Old World spp., of which 1 has become established in eastern Canada, probably extending into parts of Maine). *Dryops* Olivier 1791
- 5(3). Second segment of antenna dilated or produced into an earlike structure which may partially enclose apical segments 6
Second segment of antenna not thus dilated; dorsum typically pubescent, with conspicuous erect hairs (ca. 12 spp. from central United States to Argentina; also in Old World). *Pelonomus* Erichson 1847
- 6(5). Basal segment of antenna laminate, distinctly larger than second segment, may cover all other segments when antenna is withdrawn (Fig. 1) (3 spp. from Brazil; many spp. from Madagascar to Philippines). *Sosteia* Pascoe 1860
Basal segment of antenna not laminate, usually smaller and less inflated than second segment (Fig. 2) (ca. 26 spp. from Canada to Argentina; many spp. in Old World).
. *Helichus* Erichson 1847

COMMENTS

For the four genera that do not extend into North America, the specimens reported to date from the entire New World are: *Protoparnus*, 1; *Sostea-morphus*, 6; *Sostea*, 2 of 1 species, 1 each of 2 species; *Elmoparnus*, 2 of the species from Panama, "a few" of that from Venezuela, and 1 of a species from Mexico which I am describing elsewhere. In view of the abundance and wide-spread distribution of *Helichus*, *Dryops*, and *Pelonomus*, it is surprising that the



Figures 1-2. Fig. 1. Antenna of *Sostea westwoodii* from Borneo, with segments numbered. (Redrawn from Fig. 6 of Pascoe, 1860). Fig. 2. Antenna of *Helichus suturalis* from Oklahoma, with segments numbered. Ventral aspect of left antenna of male. Segments 3-8 may be withdrawn beneath part of segment 2.

remaining genera should be so rare. A single collection of any of these three often includes more specimens than the total sum of all reported specimens of the other four genera combined. For example, I have taken more than 18 specimens of *Helichus* in 55 collections. Nor is this attributable to overwhelming success of any single species, for 10 different species of *Helichus* are represented by 19 or more specimens in a single collection. In contrast, I have collected about 35,000 specimens of Neotropical dryopoids, working carefully in stream habitats in many localities of Central America, the West Indies, and northern South America, and have taken but a single specimen representing any of the four rare genera: one of *Elmoparnus* from a small cataract in southeastern Mexico. Since both adults and larvae of such genera as *Sostea* are terrestrial, it is perhaps not surprising that I should fail to collect them. Obviously, I have not worked in the proper habitat. Perhaps a major reason for the apparent rarity of these beetles is simply that we do not know much about them and their ecology. In the case of *Sosteamorphus*, for example, we know nothing more than the

country from which the specimens were taken—nothing even of locality or date. It is to be hoped that anyone who knowingly collects any representatives of these genera will report not only locality and date, but details of the microhabitat and observations upon behavior. Perhaps it goes without saying that I should greatly appreciate specimens of (and data concerning) any of these genera.

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2.0049 A key to the Dryopid genera of the New World (Coleoptera, Dryopoidea).

Abstract.—To date, 7 genera represent the family Dryopidae in the Western Hemisphere. *Dryops*, *Helichus*, and *Pelonomus* are common, widely distributed, and represented by many species. *Protoparnus* and *Sosteomorphus* are each represented by but one species reported once from but a single locality. *Sostea* and *Elmoparnus* are each represented by 3 species, each of which is rare and known from no more than 2 localities. No key has previously been published covering these genera. Such a key is presented, based in part upon characters drawn solely from the literature.—**Harley P. Brown**, *Department of Zoology and Stovall Museum of Science and History, University of Oklahoma, 730 Van Vleet Oval, Norman, Oklahoma 73069.*

Descriptors: Coleoptera; Dryopoidea; Dryopidae. genera of Dryopoidae; key; New World.